

ATTACHMENT

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MATERIAL SAFETY DATA SHEET

USG MICORE BOARD

MSDS NO. 02028

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USG Interiors, Inc.
125 South Franklin Street
Chicago, Illinois 60606-4878

Product Safety: 1 (800) 507-8899
Version Date: October 1, 1999
Version 3

SECTION I PRODUCT IDENTIFICATION

PRODUCT(S): USG MICORE BOARD - Micore 130 - Micore 180 - Micore 180 - Micore 230 and Micore 300
SYNONYM:
CHEMICAL FAMILY: Mixture of man-made vitreous fiber and minerals.

SECTION II INGREDIENTS

MATERIAL	WT%	TLV (mg/m ³)	PEL (mg/m ³)	CAS NUMBER
Man-made Vitreous Fiber ¹	<30	10	15(TY5(R))	65997-17-3
Expanded Perlite	<40	10	15(TY5(R))	93763-70-3
Starch	<15	10	15(TY5(R))	9005-25-8
Recycled Paper (Cellulose)	>5	10	15(TY5(R))	9004-34-6
Kaolin	<10	10	15(TY5(R))	1332-58-7
Crystalline Silica	<5	0.1(R)	0.1(R)	14808-60-7

(T) - Total (R) - Respirable

¹NIOSH recommended standard is 3 fibers/cc. WHMIS class D2B.

¹This material is slag wool. Other generic terms that are used or have been used to classify this material include mineral wool, man-made mineral fiber (MMMF), and man-made vitreous fiber (MMVF). A more recent generic term that has appeared in the literature to describe these glassy materials is synthetic vitreous fiber (SVF).

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory. All components of this product are included in the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0 Other: N/A
HMIS Ratings: Health: 0 Fire: 0 Reactivity: 0
Personal Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.
0 = Minimal Hazard 1 = Slight Hazard 2 = Moderate Hazard 3 = Serious Hazard 4 = Severe Hazard

SECTION III PHYSICAL DATA

Appearance and Odor: Gray to brown color solid panel.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): None
Extinguishing Media: Not combustible

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Special Fire Fighting Procedures: None
 Unusual Fire and Explosion Hazards: None

SECTION V HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

ACUTE: The components of Micore Board are bound in a cementitious matrix. When panels are cut or trimmed, especially with power tools, the resulting dust may cause transitory mechanical irritation to skin, eyes or respiratory tract.

EYES: Direct contact with eye can cause mechanical irritation.

SKIN: This material (in wet state or as dust) is not chemically harmful if it gets on the skin and is not immediately washed off. However direct contact of dust and especially mineral wool fibers with skin can cause skin irritation (mechanical) and itchiness.

INHALATION: Inhalation of dust can cause nose, throat, lungs, and upper respiratory tract irritation. Persons exposed to dust may be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation.

INGESTION: No known effects.

CHRONIC: Prolonged and repeated overexposure to respirable crystalline silica may result in lung disease (i.e., silicosis) and/or lung cancer. Sustained high level exposure to man-made vitreous fiber is thought to increase the risk of lung cancer. Persons with chronic or systemic skin or eye disease should use extra ordinary precautions and wear all personal protective equipment when working with this product.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: In case of contact, immediately flush thoroughly with copious amounts of water occasionally lifting the lower and upper lids (to remove particulates). Get medical attention immediately. Contact lenses should not be worn when working with this product.

SKIN: Skin contact is not a chemical hazard. Mechanical action of fibers on skin can cause itchiness. Irritation of skin may occur with prolonged and repeated contact. Rinse with cool water, followed by washing with soap and warm water. A commercially available skin cream or lotion may be helpful to treat dry skin areas.

INHALATION: If exposed to excessive levels of dust, leave area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, get medical attention.

INGESTION: No harmful effects expected. No specific recommendation. If gastric disturbance occurs, call physician.

TARGET ORGANS: Eyes, skin, lungs, and respiratory system.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung disease such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTES OF ENTRY: Inhalation, Eyes and Skin contact.

CARCINOGENICITY OF INGREDIENTS:

MATERIAL
 Man-made Vitreous Fiber
 (Respirable)
 Crystalline Silica

IARC
 2B

NTP
 None

Group 1

Anticipated

In June, 1997, the International Agency for Research on Cancer (IARC) classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

In 1987 the International Agency for Research on Cancer (IARC) concluded that there was "limited" evidence (i.e., 2B



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classification) for the carcinogenicity of airborne respirable man made vitreous fibers (rock, slag, and fiberglass). IARC based its classification on U.S. and European epidemiologic studies of workers at rock, slag, and fiber glass wool plants. In these studies a small, yet statistically significant, increase in the rate of lung cancer was observed among the workers. This increase did not appear to be associated with airborne fiber levels measured in the workplace, duration of employment, or other measures of exposure-response relationships.

Recently the U. S. epidemiologic studies were updated and the authors concluded that the rate of lung cancer among the workers was not statistically significant compared to the general population. Furthermore, an epidemiologic study of workers at USG Interiors, Inc. slag wool plants showed that exposure to slag wool fibers is not associated with increased lung cancer. This study did observe a strong association for an increased lung cancer rate and heavy long-term tobacco smoking.

In addition to the epidemiological studies on slag wool, an animal study was conducted to detect if adverse effects would result from long-term exposure to slag wool fiber. In this inhalation study rats breathed airborne slag wool fibers for most of their lives (i.e., 6 hours daily, 5 days/week for 2 years) at concentrations hundreds of times greater than airborne concentrations reported in workplaces. The results of this study showed that there were no differences in the number of tumors observed between animals exposed to filtered air only and animals exposed to airborne slag wool fibers.

A second study measured the durability (biopersistence) of slag wool fibers inhaled and retained in animal lungs. In this study, rats inhaled large quantities of slag wool fibers each day for 5 days and then the exposures were stopped. Sacrifices of groups of animals were made at different times after cessation of fiber exposures so that the numbers, size distributions and chemical changes of fibers trapped in lung tissues could be determined and compared. Results showed that in just 3 months after the exposure period very few slag wool fibers were found in the animal's lungs and virtually no fibers were found after 6 months.

The results of this biopersistence study are consistent with the results of analyses of lung tissue samples obtained from deceased slag wool employees which showed no presence of any slag wool fibers.

Results from the animal inhalation studies agree with experimental studies in which slag wool fibers were injected or implanted into the chest or abdominal cavities of animals to test the potential of the slag wool fibers to produce tumors. Such studies did not produce statistically significant numbers of tumors in animals. In one study, more than one billion slag wool fibers were injected into the abdominal cavity of each animal without producing statistically significant numbers of tumors.

In summary, evidence for the non-carcinogenicity of exposure to slag wool fibers continues to accumulate. Permanent adverse health effects are not expected as a result from exposure to slag wool fibers especially if recommended work practices are followed.

SECTION VI REACTIVITY DATA

STABILITY:

Stable

INCOMPATIBILITY:

Acids

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS DECOMPOSITION:

Oxides of carbon would be produced at high temperatures with the thermal decomposition of starch and cellulose.

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Normal clean up procedures. Containment not necessary. Treat as inert material. In case of spill, pick up or scoop up and place in container. Wear appropriate protective equipment (see Section VIII).



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WASTE DISPOSAL METHOD:

To sanitary landfill in accordance with local, state and federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Not typically necessary under normal conditions of use. Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients and to control dusting conditions. Wear a NIOSH/MSHA-approved dust respirator in poorly ventilated areas, if TLV is exceeded, and/or when dusty conditions exist. Avoid prolonged and repeated breathing of dust.

VENTILATION:

If cutting or trimming with power equipment dust collectors and local ventilation must be used.

PERSONAL PROTECTIVE EQUIPMENT:

Wear tight fitting goggles and gloves if dust is irritating. Wear long sleeved, loose fitting clothing closed at the neck and wrists and minimize skin contact. Wash work clothing separately from other clothing. Rinse washer thoroughly after use.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Keep dry.

ΔWARNING!

Overexposure to dust can cause eye, skin, nose, throat or respiratory irritation. Wear eye, skin and respiratory protection. Cut and trim with knife, razor or hand saw. Do not cut with power equipment unless either a dust collector is used on the equipment or local exhaust is used and a NIOSH/MSHA-approved respirator is worn. Failure to follow these instructions may result in overexposure to airborne man-made mineral fiber and silica. The International Agency for Research on Cancer has classified respirable crystalline silica as a probable human carcinogen (Group 1) and MMMF as a possible human carcinogen (Group 2B).
Target organ: Lungs.

FIRST AID:

EYES: Flush eyes thoroughly with water for 15 minutes. If irritation persists, consult physician.
SKIN: Rinse with cool water, followed by washing with soap and warm water.
Product safety information: (800) 507-8899.

END